

Claims 5-6 and 12-13 stand rejected under 35 U.S.C. 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention. The Examiner states that the terms "substantially continuous," "substantially regular," "substantially trapezoidal," and "substantially flat top" are unclear. Claims 6 and 13 have been amended to delete the word "substantially" from the claims. The terms "substantially continuous" and "substantially regular" are terms that are defined on page 9, lines 1-10 of the specification. Applicants respectfully submit that, in light of these definitions in the specification, one of ordinary skill in the art would understand what is claimed.¹ Reconsideration and withdrawal of this rejection are respectfully requested.

Claim 17 stands rejected under 35 U.S.C. 112, second paragraph for failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention. The Examiner states that the phrase "the film layer is imaged on a surface" is unclear. As described on page 7, line 10 and page 12, line 15, a graphic can be imaged on a surface of the film layer by, for example, coating with printing inks and transparent coatings. Applicants respectfully submit that this language is sufficiently clear to be understood by one of ordinary skill in the art. Reconsideration and withdrawal of this rejection are respectfully requested.

Claim 18 stands rejected under 35 U.S.C. 112, first paragraph, for failing to enable any person skilled in the art to which the application pertains to make and use the same. The Examiner states that the phrase "handling film" is unclear. Claim 18 has been amended to replace "film" with "tape." Support for this amendment may be found on page 4, lines 8-11 of the specification, which shows that "handling film" can be used interchangeably with "handling tape." Handling tapes include splicing, pre-mask, and pre-space tapes and may be used to aid in handling the graphic article (see, for example, page 2, lines 6-10). Accordingly, the claim as amended would enable a skilled artisan to make and use the invention. Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 1-6 and 8-17 stand rejected under 35 U.S.C. 102(b) as being anticipated by Calhoun et al. (U.S. Patent No. 5,462,765, referred to herein as Calhoun '765) and stand provisionally rejected under 35 U.S.C. 102(e) as being anticipated by copending Application

¹ See, for example, MPEP 2173.05(b).

No. 09/311,101 to Mikami et al. filed May 13, 1999, which has a common assignee with the instant application. These rejections are respectfully traversed for the reasons that follow.

The presently claimed structures have geometries designed to enhance adhesion to a tape. In particular, the invention includes modifying the structural features (e.g., pitch and sidewall angles) on the release liner itself to allow the tapes to more effectively adhere to the liner without sacrifice of the application, bonding and visual properties of the final graphic film product (see, page 2, lines 25-29 of the Specification). Accordingly, the newly amended claims recite structures having at least one sidewall that makes an angle of about 30° to about 50° with respect to the plane of the surface and a pitch of about 500 μm to about 2500 μm .

The cited references do not teach structures having a pitch within the claimed range. Calhoun '765 discloses structures having a pitch (i.e., "center-to-center spacing") of 50 to 250 μm (see, for example, col. 6, lines 60-61), and Mikami et al. discloses structures having a pitch of about 400 mm or less (see, for example, page 12, line 23). Accordingly, Applicants respectfully submit that the claims are novel under 35 U.S.C. § 102 and unobvious under 35 U.S.C. § 103(a) in view of the cited references. Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 1-17 stand rejected under 35 U.S.C. 103(a) as being as being unpatentable over Calhoun et al. (U.S. Patent No. 5,897,930, referred to herein as Calhoun '930). This rejection is respectfully traversed for the reasons that follow.

The Examiner states that Calhoun '930 teaches ridged, trapezoidal structures. The Examiner further asserts that although the cited reference does not explicitly disclose the sidewall angles of the structures, the sidewalls of the embossings can be any shape desired, ranging from a constant radius of curvature to any polygonal shape of at least 2 surfaces within the pattern. The Calhoun '930 reference, however, does not teach or suggest the selection of sidewall angles within the claimed range for enhancing adhesion to a tape. The cited reference also fails to recognize or appreciate that sidewall angles and pitch may be controlled to enhance adhesion to a tape. Thus, the claims would not have been obvious to a skilled artisan under 35 U.S.C. § 103(a) in view of the cited referernce. Reconsideration and withdrawal of this rejection are respectfully requested.

Claim 7 stands provisionally rejected under 35 U.S.C. 103(a) as being obvious over copending Application No. 09/311,101, which has a common assignee with the instant

application, in view of Mazurek et al. (U.S. Patent No. 5,650,215). Applicants advise that the present application (Application No. 09/638,346) and U.S. Patent No. 5,650,215 were, at the time the invention of Application No. 09/638,346 was made, owned by Minnesota Mining and Manufacturing Company. Accordingly, Applicants respectfully submit that the provisional obviousness rejection be withdrawn.

Claims 1-6 and 8-17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (WO 99/35201). The Examiner states that the Abe reference discloses a release liner for an adhesive backed article including structures that form a continuous and regular pattern of ridges having a pitch between 50 and 1000 μm . This rejection is respectfully traversed for the reasons that follow.

The range of pitch values cited by the Examiner refer to the maximum width of the grooves (i.e., the maximum distance between adjacent protrusions) (see, page 6, lines 26-28 of the Abe reference). In contrast, pitch, which is depicted in Figure 6 of the specification, is the ridge spacing on center. The Abe reference teaches structures having a pitch of 150 μm -11,000 μm (where, pitch is the sum of groove width (w_g) and protrusion width (w_p)), where pitch can be calculated from the w_g and w_p values provided on page 6, lines 26-28 of the cited reference. The Examiner also states that the Abe reference teaches structures with at least one of the sidewalls having an angle from 0-90. $^\circ$. The cited reference, however, does not teach or suggest the selection of pitch and sidewall angles for enhancing adhesion to a tape and fails to recognize or appreciate that pitch and sidewall angles may be controlled to enhance adhesion to a tape. Thus, it is respectfully submitted that the present claims would not have been obvious to a skilled artisan under 35 U.S.C. 103(a) in view of the Abe reference. Reconsideration and withdrawal of this rejection are respectfully requested.

In view of the above, reconsideration and withdrawal of the cited rejections are requested, and allowance of claims 1, 4-7, 10, 12-13, and 16-18 at an early date is solicited.

If questions remain regarding the above, please contact the undersigned.

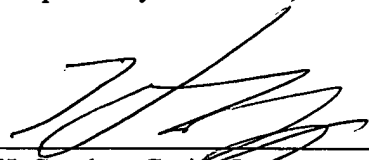
Applicant : Daniel L. Flenet et al.
Serial No. : 09/638,346
Filed : August 15, 2000
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Attorney's Docket No.: 12069-
001001 / 55680USA9A

Please apply any other charges or credits to Deposit Account No. 06-1050. Attached is a marked-up version of the changes being made by the current amendment.

Respectfully submitted,

Date: 23 October 2002



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Version with markings to show changes made

In the claims:

Claims 2, 3, 8, 9, 11, 14, and 15 have been cancelled.

Claims 1, 6, 10, 13, and 18 have been amended as follows:

1. (Amended) A release liner comprising a surface with an arrangement of structures thereon, wherein the structures extend upward from a plane of the surface, wherein the structures have a pitch of about 500 μm to about 2500 μm , and wherein the structures have at least one sidewall that makes an angle with respect to the plane of the surface of [greater than 0° and less than 90°] about 30° to about 50° selected to enhance adhesion to a tape.

6. (Amended) The release liner of claim 5, wherein the ridges have a [substantially] trapezoidal cross-sectional shape with a [substantially] flat top.

10. (Amended) An adhesive backed article comprising:

(a) a release liner comprising a surface with an arrangement of structures thereon, wherein the structures extend upward from a plane of the surface, wherein the structures have a pitch of about 500 μm to about 2500 μm , and wherein the structures have at least one sidewall that makes an angle with respect to the plane of the surface of [greater than 0° and less than 90°] about 30° to about 50° selected to enhance adhesion to a tape; and

(b) an adhesive layer on the surface of the release liner.

13. (Amended) The article of claim 12, wherein the ridges have a [substantially] trapezoidal cross-sectional shape with a [substantially] flat top.

18. (Amended) The article of claim 16, further comprising a handling [film] tape on the film layer.